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GENERAL

UNCTAD/COM/65
19 September 1995

ENGLISH ONLY

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

GUIDELINES FOR FACILITATING ACCESS TO RISK MANAGEMENT MARKETS THROUGH THE STIMULATION OF LOCAL AND REGIONAL EXCHANGES: THE CASE OF COTTON IN THE NEAR EAST/CIS/PAKISTAN

Dr. Sebahattin Gazanfer,
Secretary General
Exporters' Unions of the Aegean Region
Izmir, Turkey

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GE.95-53278

CONTENTS

Chapter		Paragraphs
INTRODUCTION		1
I.	**THE ECONOMIC ROLE OF COTTON**	2 - 27
A.	Production, consumption and stocks	6 - 8
B.	Exports and imports	9 - 10
C.	Prices	11 - 13
D.	Production and marketing policies in cotton	14 - 29
	1. Policies to guarantee and/or increase farm incomes	14 - 18
	2. Extensive state control	19 - 22
	3. Managed domestic prices	23 - 26
	4. Free market policies	27 - 29
II.	**REGIONAL CONDITIONS WITH RESPECT TO A NEW COTTON FUTURES CONTRACT**	30 - 52
A.	Commonwealth of Independent States (CIS)	31 - 38
B.	Pakistan	39 - 42
C.	Egypt	43 - 45
D.	Turkey	46 - 52
III.	**THE REASONS FOR AND FEASIBILITY OF THE ESTABLISHMENT OF LOCAL OR REGIONAL COTTON FUTURES EXCHANGES**	53 - 71
A.	Some practical problems in using overseas futures markets	53 - 57
B.	The economic functions of local and regional commodity exchanges, and potential problems with their establishment	58 - 60
C.	The suitability of the Izmir cotton exchange for the establishment of a local or regional futures market	61 - 67
D.	The role of the government: necessary facilitating policies	68 - 71
ANNEX		

INTRODUCTION

1. This report is based on a presentation to the Ad Hoc Group of Experts on Risk Management, at a session in Geneva from 26 to 28 October 1994. It describes the current situation of the cotton sector in the Near East, Commonwealth of Independent States (CIS) and Pakistan against the background of developments in the world cotton market. In particular, this report focuses on how the marketing of cotton is organized in the countries under consideration, and the contribution that a local or regional cotton exchange could make to the functioning of their cotton sectors. The report also sets out the problems encountered by cotton producers, processors and traders in the region in using the existing United States cotton contract for risk management, and discusses the conditions under which a local or regional exchange could be viable.

I. THE ECONOMIC ROLE OF COTTON

2. Cotton is the world's most important agricultural raw material. With a share in textile fibre off-take of more than 50 per cent, it is the leading textile fibre. Grown in about 90 countries, with 80 per cent of global production taking place in the developing world, it is one of the world's major cash crops. Approximately 200 million people are engaged in its cultivation, handling and transport up to the stage of lint cotton. Another 50 million people are involved in the further processing of cotton in textile industries.

3. Cotton is an annual crop: in most countries, it takes about 150 days from planting to picking; in a few regions, two harvests a year are possible. After harvest, seed cotton (composed of mature lint still attached to the seed) is normally processed in a ginnery. In the ginnery, lint and seed are separated, and the cotton lint is packed into bales, which are then bought by domestic or foreign cotton spinners and millers for processing into cotton yarn. The bulk of cotton yarn output is used subsequently in the production of textiles.

4. About one quarter of the cotton produced enters world trade in the form of bales of cotton lint (raw cotton) and cotton yarn, and as such it is one of the main commodities traded in the world market. At current prices, the export/import of raw cotton and cotton yarn amounts to some US$ 12-13 billion a year (of which developing countries earn US$ 5-6 billion). An additional US$ 200 billion a year is involved in the international trade of textiles and ready-made garments.

5. One of the remarkable characteristics of cotton is that virtually every part of the plant can be put to use. After harvest, the stalks are ploughed back into the earth as natural fertilizer (to compensate somewhat for the loss of nutrients taken up in cotton plantations). The oil extracted from cotton seed ranks in relative importance as the fifth source of edible vegetable oil. The cotton seed cake residue (the crushed seeds, after extraction of the oil) is also a major protein-rich supplement for livestock feed.

A. Production, consumption and stocks

6. Cotton production and consumption have followed a steady upward trend, especially in the second half of the twentieth century, despite the increased use of man-made fibres. The increase in production is largely attributable to increases in yield, which, in turn, are largely due to technological advances in cotton growing. Although cotton's share in the fibre market has fallen over the past few decades, in absolute terms consumption shows a relatively stable growth. However, there are large fluctuations in production as a result of climatic conditions, plant diseases, price developments, the influence of government programmes, etc. Annex figure 1 shows annual fluctuations in world cotton production as well as consumption.

Table 1

Main cotton producing countries, 1994/95 (est.)

Country	Output (million metric tons)	Percentage share
China	4.5	23.7
United States	4.1	21.6
India	2.1	11.0
Pakistan	1.6	8.4
Uzbekistan	1.3	6.8
Turkey	0.6	3.2
Others	4.8	25.3
World total	**19.0**	**100 %**

Source: Compiled from International Cotton Advisory Committee, The Outlook for Cotton Supply in 1994/95, October 1994

7. The leading producing countries are shown in table 1. Six countries account for approximately 75 percent of world production. Table 2 shows the leading cotton consuming countries, at the level of mills that spin and weave the cotton (a large part of the cotton that is processed in developing countries is then exported in the form of yarn or textiles).[1] It is worth mentioning that the extent of domestic processing of raw cotton in cotton-producing countries is steadily increasing. Countries such as India, Pakistan and Turkey regard the textile industry as the driving force of their national economic development.

[1] See also the UNCTAD secretariat study, "Market trends and commodity development for cotton", (UNCTAD/COM/32) 7 January 1994.

Table 2

Main cotton consuming countries, 1993

Country	Output (million metric tons)	Percentage share
China	4.6	24.9
United States	2.3	12.4
India	2.1	11.4
Pakistan	1.5	8.1
Brazil	0.8	4.3
Turkey	0.6	3.2
Russian Federation	0.6	3.2
Japan	0.5	2.7
Indonesia	0.4	2.2
Republic of Korea	0.4	2.2
Others	4.7	25.4
World total	18.5	100 %

Source: Compiled from International Cotton Advisory Committee, World Textile Demand, October 1994.

8. Annex figure 3 shows world cotton stocks at the end of each season: 30 July. Such stocks are between 30 and 50 per cent of total world production; they have to cover the needs of mills from August to October, when the new crop starts to reach the market. It is also interesting to note that two countries, China and the United States, account for almost half of the total stocks.

B. Exports and imports

9. Annex figure 2 shows the trend in world cotton exports and imports. Approximately one-third of world cotton production is internationally traded; the leading exporters being the United States, the West-African Franc Zone, Australia, the CIS republics, India, Pakistan, Argentina and Paraguay. Throughout the 1980s, exports of cotton lint were replaced by exports of cotton yarn and textiles; in 1992/93, cotton lint exports equalled 21.6 million bales, while yarn and fabric exports were estimated at 17.1 million bales equivalent. For a number of developing countries (in particular, Pakistan, Egypt and Turkey) exports of cotton yarn have become more important than exports of raw cotton.

10. The leading importers include Japan, Republic of Korea, Indonesia, Thailand, Hong Kong, Italy, Germany, and for the last few years, China (a large yarn and textile exporter) and Brazil. The largest importer, the European Union, accounts for one-fifth of world cotton imports. South East Asia as a group is now responsible for over half of world cotton imports, reflecting the strong growth of its textile industry.

C. Prices

11. There is no real "world cotton price". There are many different cotton origins, and every origin sells a number of different grades of cotton. Price developments on these sub-markets depend to a large extent on the supply and demand for a certain grade of cotton from a specific origin. Therefore, there are many different prices, and these prices do not necessarily move in parallel. Cotton prices for a wide range of origins and grades are collected by "Cotton Outlook", which publishes the daily Cotlook "A" index, an index based on northern European quotations for standard cotton from some 14 origins. World cotton prices expressed in terms of this Cotlook "A" index have fluctuated between 40 US cents per pound and 100 cents per pound over the last two decades; the average price was 73 cents per pound (see annex figure 4). Despite the high stock levels, world cotton price volatility remains high, higher than that of most other agricultural raw materials, and comparable to that of tropical beverages. In most years, prices range at least 20 cents per pound between the year's low and the year's high. There are several reasons for the high cotton price volatility, including the influence of government policies on production and exportable surpluses; the dependence of cotton production on unpredictable climatic factors; the relatively high costs of intra-seasonal storage; relative changes in the consumption of cotton and synthetic fibres; and changes in per capita consumption of textiles as a result of low or high economic growth.

Table 3

Frequency distribution of cotton price changes from one month to the next, January 1989 to February 1995 (Cotton Outlook Index A, Middling 1-3/32", relative frequency of percentile change of average monthly prices; total number of observations: 60)

Percentage price change	0-2 %	2-5 %	5-10 %	> 10 %
Frequency of price decreases	19 %	16 %	12 %	5 %
Frequency of price increases	21 %	14 %	10 %	3 %

Source: UNCTAD, Monthly Commodity Price Bulletin, various issues.

12. Table 3 above shows, as an example, the extent of price shifts from one month to another. As may be noted, cotton prices can change dramatically from one month to the next. In almost one out of three months in the period 1989 to early 1995, the average monthly index prices for cotton changed by more than 5 per cent from the previous month; once a year, on average, this change was even greater than 10 per cent. Prices for the different origins of cotton fluctuated even more (the Cotlook "A" index is based on the average price of the cheapest five origins of cotton out of a list of 14), and daily prices reached even further extremes. Such price fluctuations can add to the profits of producers, processors or traders, if they are lucky, but if not, a two to five per cent price change can be sufficient to make most of their profit margin disappear.

13. There are two main types of cotton: "upland" cotton, accounting for 90-94 per cent of world cotton production; and "extra-long staple", or extra-fine cotton, accounting for around 5 per cent of world cotton production. Egypt accounts for some 30 per cent of extra-long staple cotton production, the CIS for another 30 per cent; each account for about 10 per cent of world exports. Other large producers are India (with some 20 per cent of total production), the United States (the largest exporter, with a 40 per cent market share), China, Peru, Sudan and Israel. Extra-long staple cotton demands a price premium of between 20 and 250 per cent over upland cotton, and the prices for the two types of cotton do not necessarily move in tandem. However, it should be noted that in recent years, with the development of more sophisticated spinning techniques, higher-quality upland cotton varieties are starting to compete directly with extra-long staple cotton, causing price trends to move more closely together.

D. Production and marketing policies in cotton[2]

1. Policies to guarantee and/or increase farm incomes

14. In a number of countries, the main aim of government intervention in the cotton industry is to guarantee farm income at certain levels. This applies to the United States, countries in the European Union, and to some extent also Brazil and Turkey.

15. The American Marketing Loan programme has the following features:

(a) The Government determines a floor price ("target price") for cotton, and if the calendar year average market price falls below this "target price", the difference between the target price and the market price is paid directly to farmers (this is known as the "deficiency payment").

(b) The programme also contains a loan programme whereby a farmer can borrow from the Government's Commodity Credit Corporation against his cotton crop, at set advance rates. If market prices exceed loan advances, he farmer can redeem his cotton by paying off the loan and selling on the open market. If market prices are below loan rates, he can forfeit the cotton to the CCC in lieu of a loan reimbursement. Through the loan programme and the deficiency payment system, farmers are thus largely protected from downward price risks; nevertheless, they use the New York Cotton Exchange futures and options contracts fairly actively, in order to lock in higher price levels.

(c) The volume of imports of raw cotton into the United States is strictly limited, which means that textile mills have to rely on internal production for their supply, paying relatively high domestic prices. Textile mills and cotton exporters are subsidized for the difference between the price of the cotton which they buy for exports, and the "adjusted" world market prices (which are based on the Cotlook "A" index); such assistance is provided to ensure that American mills and exporters stay competitive in the world market.

16. Subsidies on cotton are estimated to be worth around US$ 1.13 billion a year during the

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[2] See also International Cotton Advisory Committee, Proceedings of the 52nd Plenary Meeting, 1993.

past five years, or approximately 25 per cent of the market value of United States cotton.[3]

17. A similar programme operates in the European Union, except that the system is based on seed cotton rather than lint cotton. Furthermore, the difference between the floor price and the world market price is directly paid to the ginners who have already paid the producers at or above the intervention (minimum) prices; these prices are set at relatively high levels. In the European system, like the American, the textile mills and cotton exporters are able to obtain cotton (from ginners and traders) at world price levels. Owing to the high level of the floor and the intervention price, subsidies equal as much as 120 per cent of the market value of cotton.[4]

18. In Brazil and Turkey, and also in a few smaller cotton-producing countries, Governments set guaranteed minimum prices. These guaranteed prices are not necessarily higher than world prices; Government subsidies are, over the years, relatively low.

2. Extensive State control

19. In a number of countries, including China, the CIS republics, Egypt and Syria, the central planning authorities determine national targets for cotton production and consumption. The achievement of these targets is encouraged by legal sanctions and sometimes by price incentives.

20. In China, for example, production quantities and national procurement prices are established by the central planners. The national plan is implemented by local authorities which enter into contracts with local growers. The Government sells agricultural inputs to cotton farmers and provides credits at attractive terms. Procurement prices are usually below world prices, and as the cotton bought at these low price levels is supplied to state-owned textile mills, this has favoured the development of the textile sector; on the other hand, as State buying prices have not kept up with the prices paid for other crops, farmers have been reducing their cotton production. Recently, the State Council has initiated some reforms in cotton policies, and farmers can now sell up to 5 per cent of their cotton on the open market once State purchase contracts have been met.

21. In the CIS republics, production is also centrally planned, with cotton being produced on collective or State farms; private land ownership is still virtually absent. Each farm receives a production quota. The Government establishes obligatory prices for seed and lint cotton. Exports require a license. The system in the CIS republics will be discussed in more detail in section II.A.

22. In Syria, production areas, varieties and input use are determined by state plans. The Government also fixes producer prices, generally at levels below world market prices. The textile plants are state-owned. Until recently, a similar system was operated in Egypt (see section II.C).

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[3] International Cotton Advisory Committee working paper XI, 26 May 1993.

[4] Ibid. See footnote 3.

3. Managed domestic prices

23. The policies of some countries aim to provide the textile industry with cotton at attractive prices; this implies that prices to growers may be kept below world price levels. Pakistan, India, Zimbabwe and Colombia are cases in point.

24. In Pakistan, the use of minimum export prices, export taxes and export quotas, often introduced on an ad hoc basis when the local textile industry has difficulties obtaining cotton, have sometimes depressed the internal cotton prices to up to 30 per cent below world market price levels (see also section II.B).

25. In India, exports and imports of cotton are managed by a licensing system. This enables the Government to control domestic prices. The system is operated in such a way that the domestic use of nationally produced cotton is encouraged.

26. Until recently, a Cotton Marketing Board had monopoly control over purchases, ginning and marketing in Zimbabwe. An import permit and tariff system was used to control imports of cotton products and to protect the domestic textile industry from external competitors. This system is likely to change as part of an ongoing structural adjustment programme.[5]

4. Free market policies

27. In a number of countries, there are no national production or consumption targets, and no government programmes to boost or depress prices. Government agencies can still provide assistance to the cotton sector through the development of irrigation projects, and the provision of technical research and market information.

28. An interesting example is that of Israel. Cotton growers in this country created the Cotton Production and Marketing Board, which has monopoly power over purchases and marketing. The Government provides security to growers by committing itself to supporting a minimum initial price that is set at a level just below the expected world market price. Final adjustments to the price paid to cotton growers are made later on the basis of the prices received for all the cotton marketed by the Marketing Board during the season.[6]

29. A summary of the production and marketing policies of cotton-producing countries appears in table 4. As is shown in the table, only a marginal portion of cotton is grown under free market policies.

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[5] See also UNCTAD secretariat report, "Commodity export policies and strategies in African countries in a process of structural adjustment: cotton, tea and horticultural products", (UNCTAD/COM/47), 18 November 1994.

[6] Ibid.

Table 4

Production and marketing policies in major producing countries, 1988/89 to 1992/93

Policy category	Countries	Share in world production
Raise farm income	United States, Greece, Spain, Brazil, Turkey	26 %
Extensive state regulation	China, CIS, Egypt, Syria	40 %
Managed domestic cotton prices to boost textile industry	Colombia, India, Pakistan, Zimbabwe	20 %
Free market policies	Australia, Argentina, Paraguay, Mexico, Peru, Nigeria, Israel, Guatemala	7 %
Policies not classified	Other countries	7 %

Source: Table compiled from International Cotton Advisory Committee working paper XI, 26 May 1993.

II. REGIONAL PERSPECTIVES FOR A NEW COTTON FUTURES CONTRACT

30. Before examining the feasibility of a new cotton futures contract in the Near East/Central Asia/Pakistan production zone, it may be worthwhile examining in greater detail the current cotton situation in the key producing countries.

A. Commonwealth of Independent States (CIS)[7]

31. Cotton is the main cash crop in Uzbekistan and Turkmenistan, taking up a major part of its agricultural area; it is a major cash crop in some other CIS republics as well. As mentioned above, government agencies set production quotas. These are allocated among collective farms ("kolkhoz") and state farms ("sovkhoz"). The former have slightly more freedom in fulfilling the plan than the latter. Production and consumption of cotton in CIS republics are shown in table 5.

[7] See also International Cotton Advisory Committee Review, May/June 1993.

Table 5

Cotton production and consumption in the CIS, 1994/95
(million metric tons, estimated)

	Production	Consumption
Uzbekistan	1,326	190
Turkmenistan	401	45
Tadjikistan	223	35
Azerbaijan	98	20
Kazakhstan	74	32
Kyrgyzstan	18	25
Total	**2,140**	**347**

Source: Compiled from International Cotton Advisory Committee documents prepared for the 53rd Plenary meeting, September 1994.

32. Approximately 40 per cent of the crop is harvested by machine. Ginning mills are usually state-owned; however, in Uzbekistan and Turkmenistan, new private gins have been built with private investment. The textile industry, formerly state-owned, is in a process of privatization. (Although it should be noted that the cotton-producing CIS countries traditionally have only a very small textile industry, most of the CIS textile mills are in the Russian Federation.)

33. Production costs are difficult to estimate owing to high inflation rates, government-regulated prices, the absence of private ownership, heavy input subsidies, etc. Procurement prices might be used as an approximate indicator of production costs; these prices are generally low owing to low wages, low fuel costs and little or no land charges. Moreover, these prices do not reflect the high external costs of cotton production, in particular the overuse of water which is leading to the depletion of the Aral Sea, and the overuse of chemicals which is creating many environmental problems.[8]

34. As may be noted from table 4, only 15 per cent of total production is consumed in the producing CIS countries. The textile mills in the Russian Federation have in recent years been unwilling to pay world market prices for their previously cheap inputs, thus freeing the region's cotton available for export for any destination: exports of cotton from Central Asian CIS republics to other CIS countries dwindled from 550,000 metric tons in 1990 to 150,000 metric tons in 1991/92. The need for export of the Central Asian cotton-growing industry will remain

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[8] See UNCTAD secretariat study, "Environmental problems and commodity trade in the Commonwealth of Independent States: an overview and the case of cotton and rice in the Aral Sea region", (UNCTAD/COM/44), 7 November 1994.

strong in the coming year; new textile mills coming into operation are expected to increase domestic cotton use to only 30 per cent of production, still leaving 70 per cent available for exports.[9]

35. The marketing system for cotton is still evolving. Under arrangements of the former Soviet Union, until 1986, all foreign trade operations were centralized in Exportljion (renamed Novoexport in 1988) based in Moscow. Already in 1986, still before the break-up of the Union, a small number of other enterprises were authorized to export cotton directly to the international market. This was consolidated in 1990, when new ministries of foreign trade as well as specialized government export companies were formed in the various CIS republics; for instance, Uzagroimpex in Uzbekistan and Turkmen Pakhtaezport in Turkmenistan. Governments set export quotas, issue export licenses and regulate foreign currency transfers. They also set the prices for seed cotton for delivery to the official purchasing organizations; these regulated prices are much below world market prices. Farmers must sell their cotton via recognized foreign trade companies.

36. Annex figure 5 shows the organization of cotton production and marketing in Uzbekistan. As part of recent reforms, state-owned farms are being converted into cooperative farms and the role of barter trade has been reduced. It may be noted that cotton farms are allowed to market a part of their production independently - 15 per cent of their quota in 1991, increasing to 30 per cent for the 1994/95 season and, in addition, all the cotton seed they produce above their quota. The prices they receive for their "free-market" cotton from the state-owned gins are determined in relation to the cotton lint prices on the Commodity Exchange of Tashkent, where the "free" cotton lint is traded. This cotton lint can be exported (if the exporter receives an export permit) through one of the official intermediaries, which gets a percentage fee for its efforts. Exports are also taxed, with the lowest taxes prevailing on the cotton produced above the quota.

37. After the break-up of the former Soviet Union, cotton trade between the CIS republics was largely in the form of barter. For example, the Russian government signed in 1993 an agreement with Central Asian cotton producers for a cotton-for-oil barter covering 382,000 metric tons of cotton (still much less than the 900,000 metric tons of cotton consumption of Russian textile mills in 1991). The Turkmenistan Government routinely uses cotton as a means of import financing by allocating cotton lint to a prospective importer. A significant part of other exports were also bartered. Barter trade was one of the main causes of relatively low cotton prices during the 1991-1993 period. Another important reason for the low prices was the

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[9] An important point to mention is the relatively long and difficult routes which need to be followed when transporting cotton from the Asian CIS to the world market. Transporting towards the East involves a very long rail route passing through Siberia to the port of Vladivostok on the Pacific Coast, from where it is shipped to Japan, Rep. of Korea, Taiwan (Province of China), Hong Kong, Indonesia, Viet Nam and a few other countries. Transport westward is more complicated: it involves reaching one of the ports of the Black Sea or Baltic Sea, after crossing the Caspian Sea and transloading at border points to change from broad to narrow gauge railways; the latter is particularly significant when transporting to Western Europe or the Baltic Sea. These long transport routes cause logistical problems, and also expose the shipment to hazards such as theft - one of the more serious problems confronting buyers. Within the CIS, transport is still relatively cheap, owing to heavy subsidies to fuel prices; when fuel prices start approaching world market price levels, increasing transport costs could absorb a major part of the proceeds of the cotton exports of Central Asian republics.

insecurity caused by the break-up of the marketing arrangements prevailing in the former Soviet Union: many contracts with foreign buyers were defaulted upon in 1990 and 1991. Such trade uncertainties still persist, owing in part to the limited experience of the new Central Asian exporters with the world trade system.

38. In conclusion, the establishment of local cotton exchanges in the Central Asian republics, or the use in these countries of another exchange in the region, will only become possible as trade is further liberalized, and the insecurities which now impinge on trade with these countries are alleviated.

B. Pakistan

39. With 60 per cent of total exports, cotton and cotton-based goods are the single largest source of foreign exchange earnings of Pakistan, the world's fourth largest cotton producer. Until the nationalization of the export sector in 1973, lint cotton was exported by the private sector; subsequently, the Government has played a major (and often beneficial) role. A new public-sector company, the Cotton Export Corporation of Pakistan (CEC), was incorporated in November 1973 to handle the export trade of raw cotton. Its role and functions were eventually enlarged to include the implementation of government policies regarding the cotton sector: improvement of cotton ginning, price support operations, standardization, improvement in quality and storage facilities, etc.

40. From 1973/74 to 1987/88, all exports were handled by the CEC. Private traders were allowed to participate in exports in 1987/88, but only when purchasing cotton out of CEC stocks to meet their export requirements. Since 1988/89, the private sector has also been allowed to procure cotton directly from the open market to meet export commitments. However, the Government still imposes a number of constraints on the export sector, including a minimum export price and ad hoc export taxes.

41. In terms of cotton prices, the Government sets, since 1976/77, minimum prices for growers. Prices are announced by the Government every year before the beginning of the sowing season. At harvest time, it also determines minimum support prices for lint cotton for ginners. For exporters, the Government determines both a daily-adjusted minimum export price and a "benchmark" export price. The minimum export price is used to keep cotton from being exported when world market prices increase, while, if exports do take place, a variable export duty is levied on the difference between the minimum export price and the "benchmark" export price.

42. Cotton futures were traded at the Karachi Cotton Exchange as far back as the 1930s. Trade was interrupted during the 1940s, but futures trade was started again in 1955 and continued until the late 1970s. It was halted when the Government introduced, in 1976/77, the price protection policies described above (which, it should be noted, were highly successful in promoting cotton and textile production). The private sector has recently requested permission from the Pakistan Government to re-introduce cotton futures trade.[10]

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[10] Personal communications to the author from the Cotton Exchange of Karachi, 1994.

C. Egypt[11]

43. Egypt, one of the best known producers of "extra-long staple" or "extra-fine" cotton, has seen its production decline in the past decade. Its exports have even dropped further, as an increasing part of the crop is processed domestically - in 1992, only 5 per cent of the crop was exported as lint (raw cotton). Imports of raw cotton into Egypt, in particular from the United States, are presently more than double the country's export volume.

44. Until 1994, the Egyptian Cotton Authority, which formed part of the Ministry of Economy and Foreign Trade, controlled cotton marketing, ginning and exports. Exports were made through six marketing companies controlled by the Cotton Authority, which bought from growers at predetermined prices and sold the cotton, again at government-set prices, to local mills and foreign buyers. Another public holding company, the Textile Industries Corporation, had a monopoly on cotton yarn production and controlled 90 per cent of the weaving industry. From 1985 onward, the expansion of the domestic cotton processing industry was an important policy goal of the Government, and so prices to producers were set rather low.

45. From 1991/92 onwards, internal trade was gradually liberalized. This effectively ended almost 40 years of Government monopoly on the cotton industry. Under the new system, which was firmly installed by the passing of three new laws in Parliament in 1994, the private sector can freely grow, gin, market and export cotton; this in effect allows traders, farmers' cooperatives and ginneries to compete with the public export companies and mills (which are expected to be privatized in the future):

- The Internal Cotton Trade Law allows farmers to sell their cotton to private dealers, to mills or to the Government. A price stabilization fund is being established to protect farmers from adverse price movements. Prices to the farmers are to be announced at an early stage, and set in line with international cotton prices.

- The Cotton Exchange Market Law envisages the revival of a cotton spot market. Such a market, established in 1883, operated in Alexandria in the past and attracted not only local but also international participation; it was closed, however, in 1964. The introduction of forward or futures contracts is currently not envisaged.

- The Cotton Exporters' Association Law establishes the rights of private exporters, as well as rules for the settlement of disputes. Exporters are to be given export allocations regardless of the size of the crop or of local mill requirements; the additional needs of cotton mills will have to be met by imports. Export prices are still established by the Government, but such prices are now set in line with world market prices. The role of price-setting will be taken over by the Cotton Exchange Market, once it has been set up.

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[11] See P. Varangis, E. Thigpen and T. Akiyama, "Risk Management Prospects for Egyptian Cotton", paper prepared for the workshop on "Risk management in liberalizing economies - issues of access to futures and options markets", World Bank, Paris, 3-5 June 1992.

D. Turkey

46. Most of the cotton produced in Turkey has been used by the country's fast developing textile industry - which accounts for around 20 per cent of industrial output, and employs about one-third of all workers. For the past five years, both production and consumption have remained around 600,000 metric tons, leaving the country in a delicate balance between imports and exports. This factor, coupled with the fact that the agricultural sales cooperatives may purchase up to one-third of the total crop in their efforts to keep domestic prices firm, is one of the main causes for Turkey's high internal cotton price volatility.

47. Trade in both seed and lint cotton is fully liberalized and government intervention has been minimal, and basically limited to purchases through the agricultural sales cooperatives unions. These unions implement the minimum support price system for seed cotton. If the minimum prices are set at higher levels than world prices, this leaves the cooperatives and the private sector mills at a disadvantage. Even when prices are set equal to or below world prices, cotton exports at the beginning of each season may trigger an increase of domestic prices above world market levels, since a deficit will develop on the supply side and imports become necessary.

48. Annex figure 6 shows the weekly average of domestic market values compared to the Cotlook "A" index values. It can be seen from these figures that domestic cotton prices have been above world prices for most of 1994, as was the case in earlier years.

49. Annex figure 7 shows Turkey's marketing channels in seed and lint cotton. Cotton seed is bought by private ginners (who normally account for two-thirds to three-quarters of the market) and by cooperative unions; a small part is ginned on a contract basis for the growers themselves (who then stock the lint in anticipation of higher prices). Cooperatives can buy on their own account or, when domestic and world market prices are low, on the government's account (in the latter case, the Treasury carries any concomitant losses).

50. Although a small part of cotton lint is directly exported by the cooperatives, most is traded through the Izmir Cotton Exchange, an integral part of the Izmir Commodity Exchange. The Commodity Exchange, with a history and experience of more than a hundred years, is the focal point for cotton trade. Although it also acts as a marketplace for other commodities, cotton accounts for half of its volume of trade. The amount of cotton traded annually has shown a gradual increase, as is clear from table 6.

Table 6

Cotton trading volumes at the Izmir Cotton Exchange, 1985 to 1994

Year	Quantity (metric tons)	Value (million Turkish lire)
1985	117, 584	64, 145
1986	148, 692	123, 713
1987	136, 835	210, 867
1988	192, 148	371, 385
1989	204, 267	738, 356
1990	194, 084	1, 060, 015
1991	246, 755	1, 901, 190
1992	197, 745	2, 160, 993
1993	297, 814	4, 426, 015
1994	365, 222	16, 546, 088

Source: Data provided by the Izmir Cotton Exchange

51. Trade on the exchange is through brokers, who act on behalf of ginners, merchants, exporters, importers, textile mills and cooperatives; in the cotton market, there are 60 such brokers.[12] Most of the trade is in spot contracts. There is some trade in forward contracts, but these are used for logistics reasons rather than to provide a risk management function. Open outcry trading takes place every working day in one half hour session; subsequent trading among brokers is based on the prices established by the end of this trading session. Although most transactions on the exchange are directly related to physical trade needs, some 10 to 15 per cent of transactions are speculative, indicating the presence of a group important for the eventual introduction of trade in future.

52. The Izmir exchange forms an efficiently operating and well-established spot market. Trade on the exchange is well-regulated. The exchange has the capacity to ensure quality control. The 1980s saw a process of growing involvement of the private sector in production, processing and marketing of cotton; risks which previously were borne by the Government now rest on the shoulders of the private sector. Linked to this and to complaints from the textile industry about the burden placed on them as a result of relatively high cotton prices, serious consideration has recently been given to the possibility of establishing a futures market.[13] Initial evaluations have shown that such a market would be useful for spreading risk and have a real potential: neither the New York No.2 futures nor the Cotlook "A" values show a good correlation with Izmir cotton spot prices. These assessments have also highlighted the need for the use of the US$ (or another major foreign currency) as the underlying currency for futures contracts rather than the Turkish lira, which has shown a gradual but continuous tendency of depreciation.

III. THE REASONS FOR AND FEASIBILITY OF THE ESTABLISHMENT OF LOCAL OR REGIONAL COTTON FUTURES EXCHANGES

A. Some practical problems in using overseas futures markets

53. Countries in the Near East/Central Asia/Pakistan production zone have a number of problems in using the New York No.2 cotton futures contract. One set of problems concerns difficulties of access: communication difficulties owing to distant geographic location and different time zone, as well as language hurdles; high telecommunication costs; little or no availability of local branches or representative offices of dealers, brokers and other intermediaries; and difficulties in closely following (from a different time zone and at a large distance) market developments and the events which affect market behaviour.

54. There are legal problems as well, including some Governments' prohibition of participation in overseas futures markets and insufficiencies in the legal framework governing

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[12] See K. Somel and D.L. Umali, "The Potential for a Cotton Futures Market in the Izmir Commodity Exchange", paper prepared for the workshop on "Risk management in liberalizing economies - issues of access to futures and options markets", World Bank, Paris, 3-5 June 1992.

[13] See S. Gazanfer, "Assessing the establishment of a cotton futures market in Turkey", paper presented at a Technical Seminar at the 51st Plenary Meeting of the International Cotton Advisory Committee, Liverpool, United Kingdom, September 1992.

the use of such markets (many entities do not know whether they are allowed to use these markets, and if so, how their earnings/losses would be treated for taxation purposes).

55. Moreover, there are several financial and economic problems. Depending on hedging volume, large sums of foreign currency transfers may be necessary when using futures contracts. This is made complicated, among other ways, by restrictions on currency transfers and currency holdings, which prevent, for example, the keeping of overseas accounts for payments arising out of the participation in futures markets. In addition, exporters, processors and importers from the region face frequent difficulties in obtaining international credits. Furthermore, futures contract settlement by delivery of a physical commodity is not possible for overseas producers, except when buying United States cotton for delivery to the exchange.

56. Various national cotton policies or cotton industry structures hinder a proper use of futures markets because, within their context, the risks faced by producers, exporters, processors and importers are different from those which can be covered on a futures exchange. Moreover, there are basis risk problems arising out of the different price movements of different types of cotton. When using a futures contract for hedging purposes, one always runs the risk that the physical market prices for one's cotton and the cotton futures prices do not run in parallel (the price differential is called the "basis", and changing differentials give rise to what is called the basis risk). In order to be able to make sound use of the futures contract, the developments of the basis may at times be erratic, but should still be more predictable than absolute cotton price levels. This may not be the case for traders from the Near East/CIS/Pakistan region who wish to use the existing cotton futures contracts. In the New York Cotton Exchange, the No.2 cotton and the Cotlook "A" futures contract are traded. The No.2 contract specifies upland cotton low middling 1 1/16", delivery in the United States, while the Cotlook "A" index is for the more commonly traded 1 3/32", Northern Europe on a cost, insurance and freight (CIF) basis. Both are for upland cottons, which represent around 95 per cent of world cotton production. For the extra-fine cottons produced in Egypt and the CIS (both of which account for some 30 per cent of global production of this type of cotton), the use of these two contracts for risk management purposes is hardly useful because of basis risks.

57. Even for the upland cottons produced in the Near East, CIS and Pakistan, the risk reduction possible through hedging on the No. 2 contract is very limited: owing to United States Government programmes and the restrictions on cotton imports into the United States, world prices and No. 2 prices have frequently diverged. Trade in the Cotlook "A" contract, which reflects better the conditions on the world market,[14] does not provide much liquidity; during the whole of 1994, only 79 contracts were traded. Moreover, it should be noted that a major part of cotton produced in the region is traded and processed internally. Cotton yarn exports have now overtaken cotton lint exports in relative importance in Egypt, Pakistan and Turkey. CIF prices in northern Europe are not always well-correlated with domestic prices (see, for the case of Turkey, annex figure 6). For these reasons, the price protection that producers, processors, exporters and importers in the Near East/CIS/Pakistan region can achieve through using the

[14] The Cotlook "A" index is the average of the cheapest five CIF northern Europe prices of 14 cotton growths, including Turkish Izmir/Ant St I Wht 1 3/32" RG, Central Asian Mid 1 3/32", and Pakistani Punjab SG 1505 1 3/32".

New York market may not be satisfactory.[15]

B. The economic functions of local and regional commodity exchanges, and potential problems with their establishment

58. It can be argued that local or regional exchanges, if properly established, may provide workable solutions for some of the problems outlined above of using overseas markets. Such exchanges would have several functions. First, they could act as a platform for the improvement of price formation and price discovery. The existence of a futures market, where the profitability of speculative transactions is directly related to the quality of information, automatically creates the incentives for gathering market information, which through the futures exchange will spread to the whole marketplace. Secondly, for small and medium-sized participants (including large farmers and farmers' associations), who cannot effectively participate in an international exchange, hedging price risks would become possible. Thirdly, futures trading activity and the related service earnings would remain in the country or region; there will also be indirect economic benefits, as the presence of a futures market often gives rise to the development of an important trade support infrastructure, including trade finance banks, warehousing companies, and inspection and supervision companies. Fourthly, because of the local presence of warehouses, and greater ability of local banks to ensure the value of stocks of the commodity, it would become much easier to use these stocks as a collateral for hedging credit lines. Fifthly, commodities that are tenderable against a futures contract are generally at a premium over commodities that are non-tenderable; therefore, local futures contracts (which specify certain relatively high standards) would assist in the process of quality improvement, the development of standardized contracts for physical trade, the improvement of warehousing facilities, etc.

59. Nevertheless, the creation of local or regional exchanges in developing countries is not an easy task. There are a number of identifiable difficulties. First, frequent economic restructuring processes introduce uncertainty. Secondly, the legal and regulatory basis for futures markets may not be well defined, or may even be non-existent. Thirdly, the absence of well-functioning spot markets, combined with a poorly developed private sector, or excessive government intervention, implies that in some countries, it is too early to introduce a futures market. Fourthly, the absence of well-functioning capital markets, including banks that understand risk management operations, and their provision of credits and collateral management services to futures market users, makes it more difficult to manage risks, while at the same time reduces the incentives for doing so (in addition, banks themselves are kept from undertaking transactions in futures markets). Fifthly, as in many other regions, there appears to be a lack of adequate knowledge about risk management instruments.

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[15] The price correlation between the New York No. 2 contract, on the one hand, and Central Asian, Chinese, Pakistani and Turkish cottons, on the other, is rather low. Thus, the risks of divergent price movements for one's own cotton and the New York No. 2 cotton are large; this renders the use of the No. 2 contract for risk management less than optimal and generally not advisable for producers in these developing countries. With the Cotlook "A" index the price correlation of these cottons, except that from Turkey, is much better, implying a basis risk of 15 to 30 per cent (sufficiently low for hedging, if only futures contract liquidity were high enough); Turkish prices are scarcely correlated to the index. (P. Varangis, E. Thigpen and S. Satyanarayan, "The use of New York cotton futures contracts to hedge cotton price risk in developing countries", World Bank, 4 January 1994).

60. A sixth factor is the high rate of inflation in several of the countries in the region, which can pose serious difficulties in futures trading. Even if contracts are denominated in a "hard" currency, users will still be exposed to local currency risks. A further factor is that, despite progress in recent years, standardization in the cotton trade is still not sufficient.[16] While Turkey, Pakistan and Egypt have well-established and reliable quality-control systems (for example, the standards set by the Pakistan Cotton Standard Institute have been recognized by the Liverpool Cotton Association), the producers in the CIS republics suffer from improper grading and standardization. Quite recently, Uzbekistan set up a government entity to classify cotton in accordance with international standards. Also, the types of cotton traded are not the same throughout the region, although it would appear that within some countries, production is sufficiently uniform; in Egypt, where there are two main types of cotton (ELS and LS), their prices move closely together.[17] Finally, in some countries the absence of adequate infrastructural facilities such as transport, telecommunications, clearing services, warehousing, etc. causes difficulties.

C. The suitability of the Izmir cotton exchange as a local or regional futures market

61. In order for a futures market in Izmir to be viable, the following conditions need to be met:

(a) The supply and demand for cotton must be sufficiently large;
(b) The pricing of cotton must be determined by free market forces, without monopolistic or government control;
(c) Cotton must be well-standardized;
(d) Cotton price fluctuations need to be sufficiently large to warrant the use of risk management techniques;
(e) There needs to be a well-functioning spot market for cotton;
(f) The futures market must have the support of commercial interests;
(g) There would need to be a sufficiently large group of speculators;
(h) Infrastructural facilities and other services should be sufficiently well-developed, and the legal and regulatory framework needs to be conducive to futures market trading.

62. As regards the supply and demand for cotton, Turkey is the world's sixth largest producer, with a raw cotton production which can be valued (in world market prices) at US$ 700 to 1,100 million; production is expected to increase further when the Southeastern Anatolian Irrigation Project is fully implemented. Most of the cotton produced is absorbed by the domestic textile industry, which is expected to continue growing. Exports of cotton, for which there is a ready market, are expected to expand in the coming years. It would thus appear that the supply and demand for cotton in Turkey is sufficiently large.

63. The pricing of cotton in Turkey is not a problem either. Since 1980, the general policy

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[16] It should be noted that, in the case of cotton lint or cotton yarns, the storability of the products (another condition for the feasibility of a futures contract) is not a problem: even in tropical climates, bales of cotton lint can be stored for a period of at least two years.

[17] Varangis, Thigpen and Akiyama, op.cit.

orientation in the Turkish economy has been towards the complete liberalization of trade in agricultural commodities, including cotton. Governmental interference has been kept to the minimum in most years, when cotton fetched good prices in both the domestic and international markets. However, domestic cotton prices were sometimes influenced by the support price system when world cotton prices were relatively depressed. It is evident that such government interventions will have to be minimized or a mechanism will have to be designed so that such interventions do not affect free market operations (it should be noted in this context that the United States' cotton futures market functions well despite a system of governmental price support). Similarly, measures need to be devised to minimize the adverse effects arising from the purchasing policies of cooperative unions. Presently the Turkish Government is studying ways and means of minimizing its involvement in the cooperative unions, and of creating an environment in which cooperatives can function on their own.

64. Cotton production in Turkey is well-standardized: 70 to 80 per cent of the cotton traded in the Izmir Cotton Exchange is of one quality (Izmir Std. 1 white, 1 3/32"). However, in terms of potential usage by other countries in the region, the lack of region-wide standardization would appear to be a potential problem. Efforts to improve the grading of cotton and to standardize export norms are under way in several producing countries, and these are likely to increase greatly the potential and possibilities open to these countries to utilize an eventual futures contract on the Izmir Cotton Exchange.

65. The spot market for cotton in Turkey is well-organized, with a large amount of cotton passing through one central marketplace, as indicated by the figures for the Izmir Cotton Exchange discussed above (see section II.D). Cotton prices in Turkey are also rather volatile, as are the prices on the world market. A futures market is likely to get the support of well-capitalized traders, as well as of speculators and of the financial sector in Turkey. The growth of the textile industry, in particular that of the clothing sector, has created a large potential interest in cotton risk management and indeed, major actors in the textile sector have shown their keen interest in enhanced possibilities for risk management. It should be noted that contracts for textiles often have to be signed months in advance, and without the ability to lock in the costs of their major input, textile mills have to shoulder major price risks; in exports of raw cotton and cotton yarn as well, longer-term contracts (for periods from three months to a year) are common, exposing exporters to significant price risks. It is likely that banks and other financial institutions will also be interested in supporting futures market trade once it has been initiated. Speculators already account for about 20 per cent of the volume of spot trade at the Izmir Cotton Exchange, as noted earlier, despite the problems they may have with making or taking physical delivery in cotton. This risk will be much smaller once a futures market is introduced, and therefore, it can be expected that the participation of speculators in an established futures market, will be even higher.

66. The physical infrastructure for the conduct of futures trading as well as warehousing facilities are already available with the Izmir Cotton Exchange. The legal framework for futures trading has also been created, with the adoption of the Capital Markets Law; indeed, a gold futures market has recently started in Istanbul. However, detailed work on the regulatory aspects of operating and using futures markets will still be necessary, as well as work on the administrative structure of a futures exchange, including the creation of a clearing house.

67. All these factors would seem to indicate the viability of a futures market in Turkey, and, in this connection, the Izmir Commodity Exchange has signalled its intention to initiate futures trading in cotton before the end of 1995.

D. The role of the government: necessary facilitating policies

68. The following recommendations are intended to contribute to a better and more efficient management of price risks by policy-makers. It should be emphasized, however, that some of these recommendations may be neither fully applicable nor relevant to some countries.

(a) Current levels of support to agriculture have become generally unsustainable. Extensive intervention by government in the pricing and marketing of agricultural commodities, including cotton, must be reduced and gradually eliminated.

(b) Significant savings in marketing costs could be realized by increasing the involvement of the private sector in the procurement, storage, handling and trading of these commodities.

(c) Governments should meanwhile concentrate on the creation and facilitation of free and transparent price formation environments, including the conduct of detailed costs/benefits analysis of establishing specialized commodity exchanges on a national level;

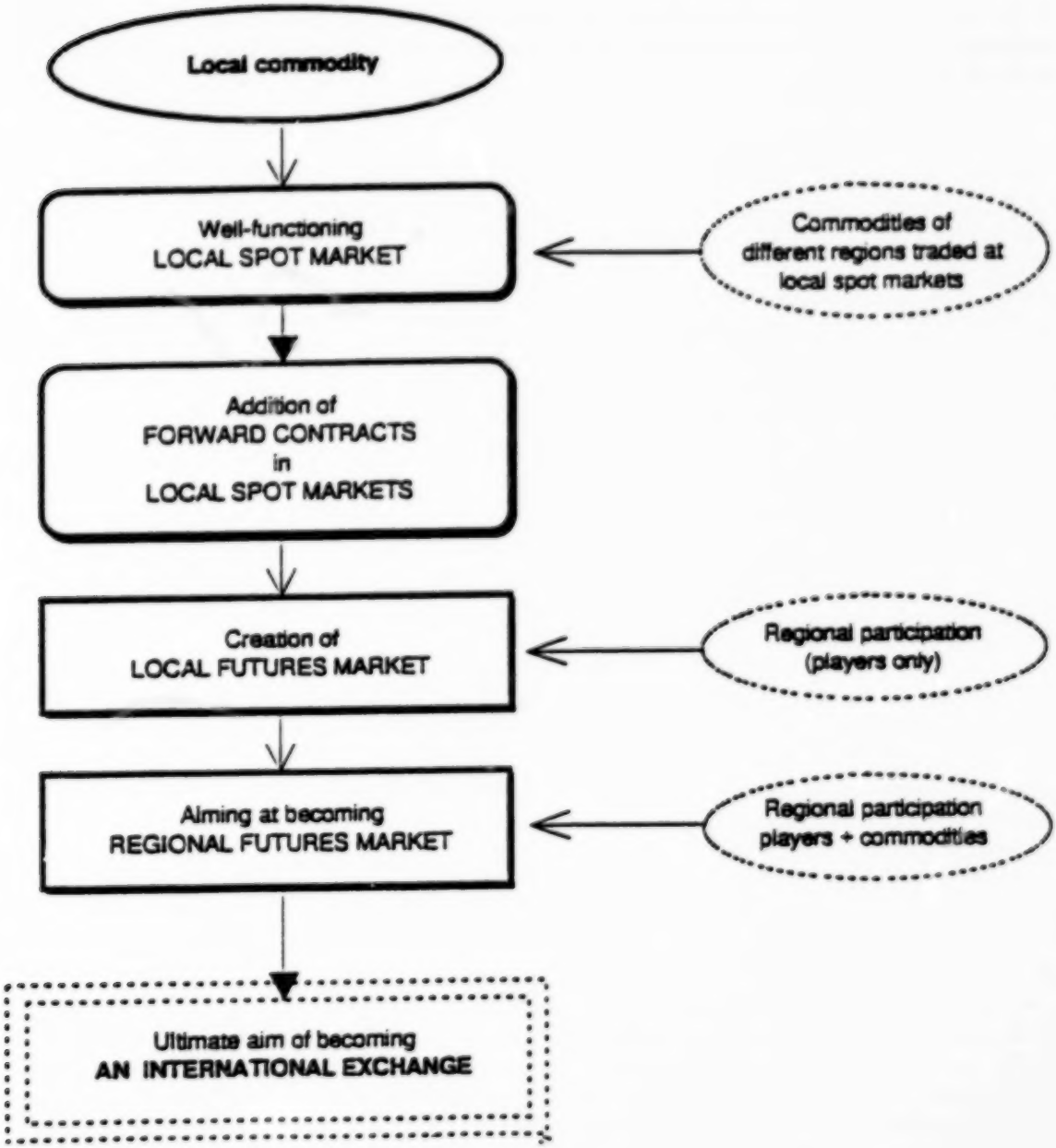
(d) These commodity exchanges should initially be promoted as spot markets, and as their operations gain the desired efficiency, effectiveness and volume, the addition of forward contracts and eventually futures and options contracts could be facilitated.

(e) Such promotion and facilitation inevitably would require the development and adoption of appropriate legal, financial and economic framework and regulation; on the other hand, infrastructural investments and the provision of necessary training are also an integral duty of the government.

69. The flow chart which follows provides a suggested programme for the development of a commodity exchange. Once a local commodity such as cotton - which registers high price volatility - has a market with sufficient volume and a large number of active participants, it will not be difficult to establish a well-functioning spot market (as has indeed happened in Izmir). As trading in the spot market develops, cotton and other commodities of other countries in the region could also be included in its trade.

70. The addition of forward contracts in this local spot market would be the first step towards futures trading. After sufficient experience and volume in forward contracts has been reached, the emergence of a local future markets will be likely. An efficient local future market will

SUGGESTED PHASES OF EXCHANGE DEVELOPMENT



also draw in other participants from the region.[18] A fully operative regional futures market can only be achieved if the commodities of different origins within the region are traded in this market, in addition to the presence of the current players. Once this has been achieved, it would not be overly ambitious to suggest that the ultimate aim should be to convert this regional futures market into an international one.

71. Each of these development steps may encounter constraints and difficulties, as a result of the problems discussed above. One can cite many examples of failures, but also a number of success stories. Great responsibility therefore rests upon the management of a commodity exchange as well as upon governmental authorities to ensure the long-term success of a venture of this kind.

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[18] In northern European markets, the prices of Central Asian, Mexican, Pakistani, Australian and Turkish cottons have a high short-term correlation. Of the main cottons grown in the Near East/Central Asia/South Asia region, only Egyptian long-staple cotton shows a price development of its own: there is no month-to-month relationship between these prices, on the one hand, and Turkish and Central Asian cotton prices, on the other hand. It should be noted that with the liberalization of the Egyptian cotton sector, Egypt's cotton prices should come more in line with world market prices; and with the advancement of processing technologies (which enable the use of upland cotton for purposes for which formerly extra-fine cotton was required), the prices of extra-fine cotton are likely to start developing more in accordance with upland cotton prices. See P. Varangis, E. Thigpen and T. Akiyama, "Risk Management Prospects for Egyptian Cotton", op. cit.

Annex

Figure 1 World Cotton Production and Consumption since 1980/81

Figure 2 World Cotton Exports and Imports since 1980/81

Figure 3 World Cotton Stocks since 1980/81

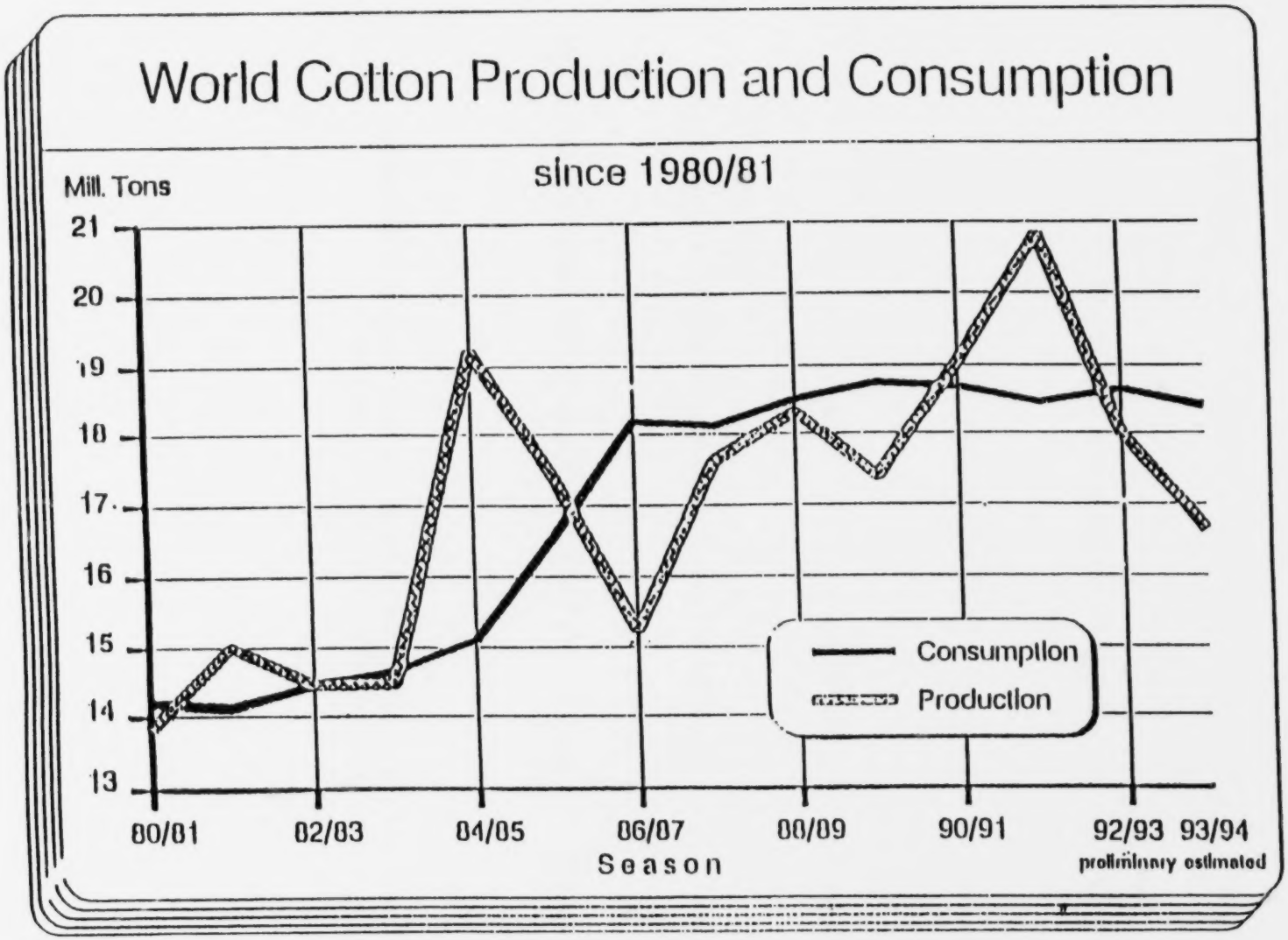
Figure 4 'A' INDEX, January 5, 1973 - to July 9, 1992

Figure 5 Organization of Cotton Production and Marketing in UZBEKISTAN

Figure 6 Comparison of Cotlook 'A' Index and Turkish Domestic Market Values 1993/94

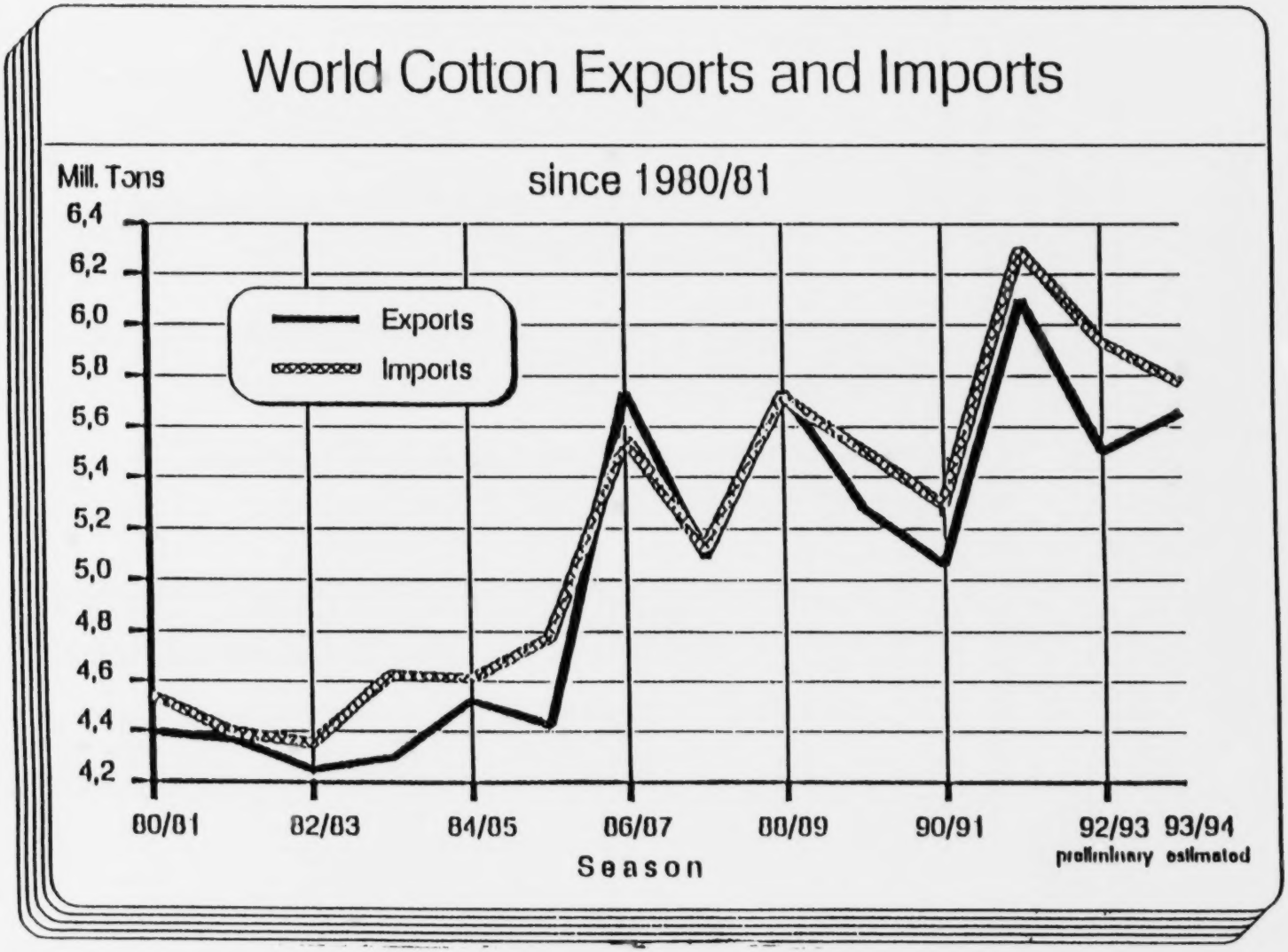
Figure 7 Local or Regional Exchange as a Risk Management Intermediary, Marketing Channels in Seed and Lint Cotton

Figure 1



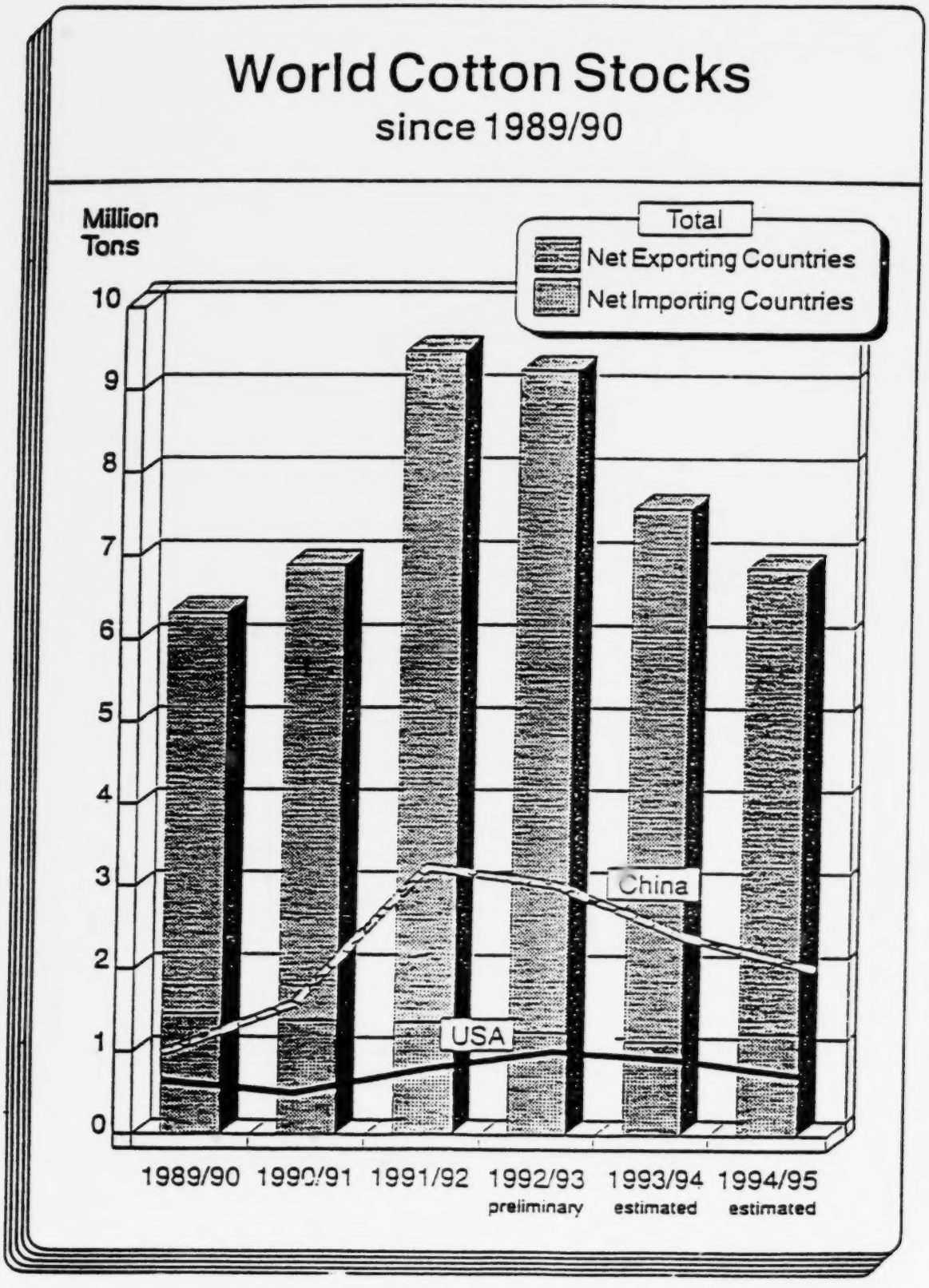
Source: Annual Report of the Bremen Cotton Exchange, 1994.

Figure 2



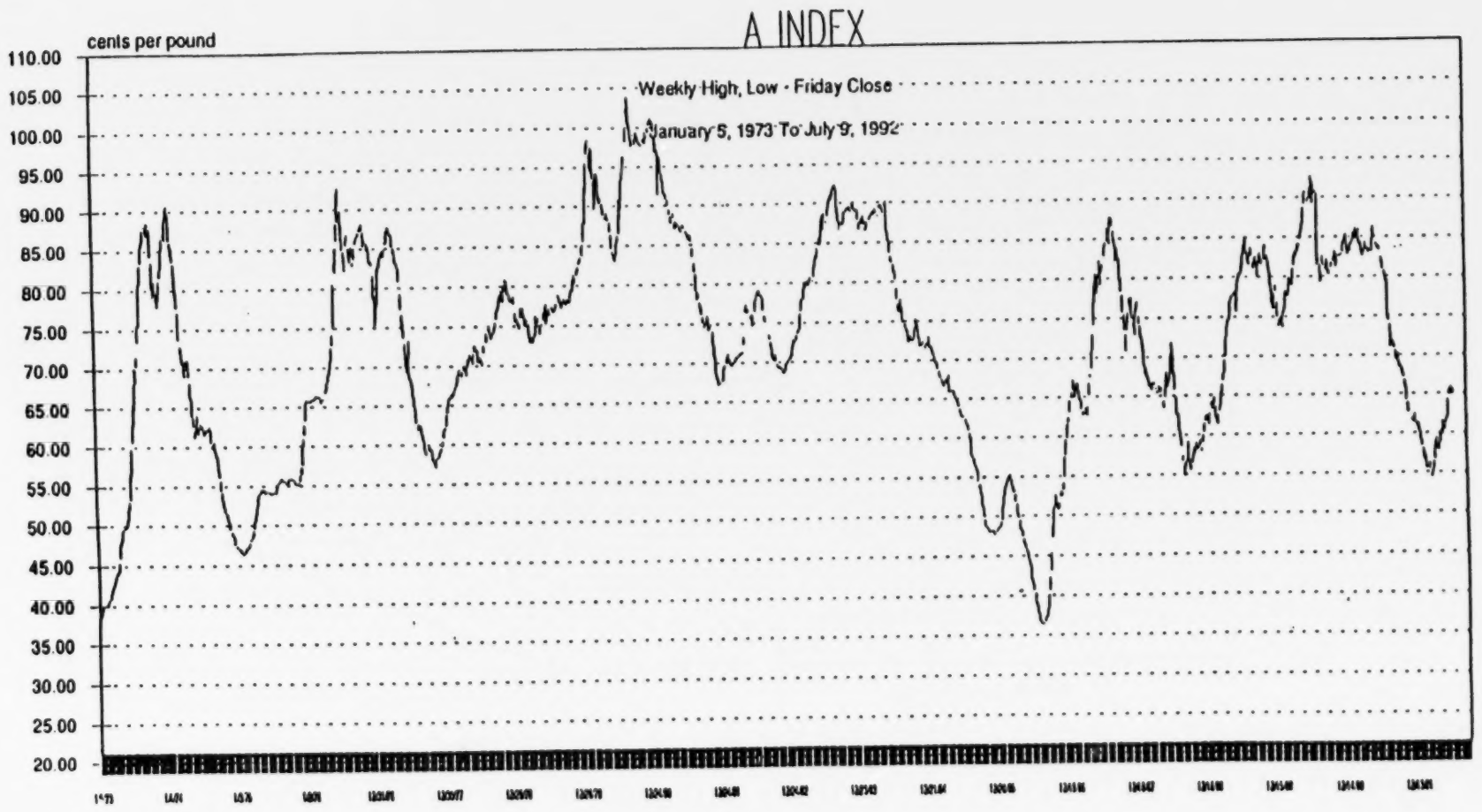
Source: Annual Report of the Bremen Cotton Exchange, 1994.

Figure 3



Source: Annual Report of the Bremen Cotton Exchange. 1994.

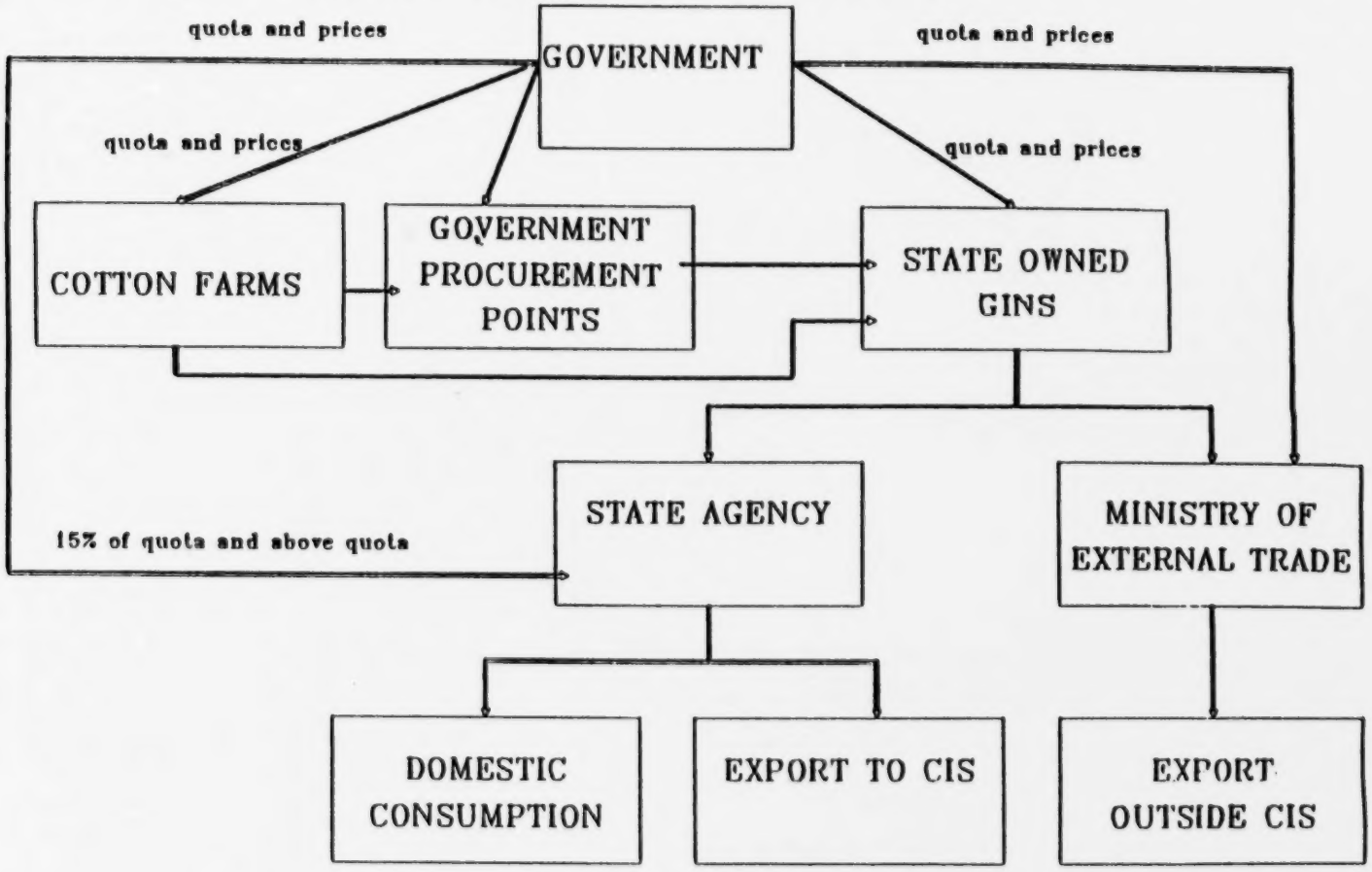
Figure 4



Source:Cotlook, Ltd.

Figure 5

ORGANIZATION OF COTTON PRODUCTION AND MARKETING IN UZBEKISTAN



Source:Taken from International Cotton Advisory Committee (ICAC) Review, May-June 1993, p.9.

Figure 6

Comparison of Cotlook 'A' Index & Turkish Domestic Market Values
(For Std 1 Ege Cotton)

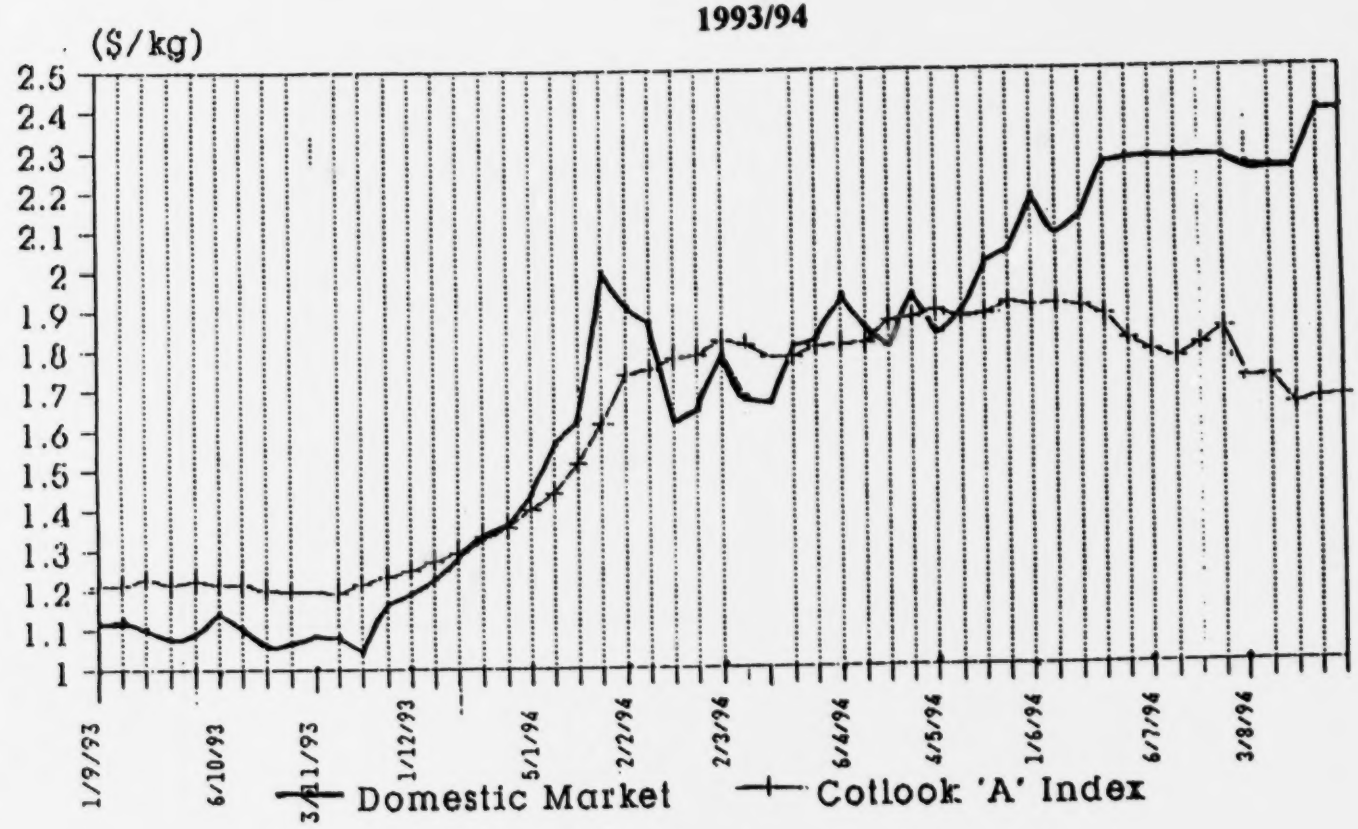


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Figure 7

LOCAL OR REGIONAL EXCHANGE AS A RISK MANAGEMENT INTERMEDIARY MARKETING CHANNELS IN SEED AND LINT COTTON